

CLAIMS

What is claimed is:

1. A photo album comprising:
a cover having a surface formed from a water-resistant material;
an ink-receptive coating disposed on at least a portion of a surface of said water-resistant material, said coating comprising a mixture of a water soluble nonionic polymer; a water soluble amphoteric copolymer; and a polyalkylene glycol or silicone surfactant; and
sheets for receiving photographs, said cover and sheets for receiving photographs being interconnected together to form a photo album.
2. A photo album as recited in claim 1, wherein the nonionic polymer is selected from the group consisting of polyvinyl alcohol, water soluble cellulose derivatives, gelatin, and chitosan.
3. A photo album as recited in claim 1, wherein the nonionic polymer comprises a cellulose derivative selected from the group consisting of hydroxyethylcellulose, hydroxypropylcellulose, carboxymethylcellulose, methylhydroxycellulose, and methylhydroxypropyl cellulose.
4. A photo album as recited claim 1, wherein the amphoteric copolymer is formed from a plurality of monomers comprising about 50 to 90% by weight cationic monomers, about 10 to 30% by weight anionic monomers, and 0 to about 30% by weight neutral monomers.
5. A photo album as recited in claim 4, wherein the plurality of monomers comprises about 60 to 80% cationic monomers, about 10 to 20% anionic monomers, and about 10 to 20% neutral monomers.
6. A photo album as recited in claim 4, wherein the cationic monomers are selected from the group consisting of trialkylammoniumalkyl (meth)acrylates, allylalkyl ammonium salts, and vinylbenzylammonium salts.

7. A photo album as recited in claim 4, wherein the anionic monomers are selected from the group consisting of (meth)acrylic acid and acrylamido-2-methylpropane sulfonic acid.

8. A photo album as recited in claim 4, wherein the neutral monomers are selected from the group consisting of acrylamide, dialkylaminoalkyl (meth)acrylates, hydroxyalkyl (meth)acrylates, and N-vinyloxazolidone.

9. A photo album as recited in claim 1, wherein the amphoteric copolymer is formed from a plurality of monomers comprising about 60 to 80% dimethylaminoethyl methacrylate methyl chloride quaternary salt; acrylic acid and acrylamido-2-methylpropane sulfonic acid in a combined amount of about 10 to 20%; and about 10 to 20% hydroxyethylmethacrylate.

10. A photo album as recited in claim 1, wherein the nonionic polymer comprises a polyvinyl alcohol having a saponification level of about 85 to 95%.

11. A photo album as recited in claim 1, wherein the polyalkylene glycol or silicone surfactant comprises a polyethylene glycol having a weight-average molecular weight of at least 600.

12. A photo album as recited in claim 1, in which the gel ink-receptive coating further comprises a crosslinker.

13. A photo album as recited in claim 12, wherein the crosslinker is a dialdehyde.

14. A photo album as recited in claim 13, wherein the crosslinker is glyoxal.

15. A photo album as recited in claim 13, wherein the crosslinker is a polyethoxylated dialdehyde.

16. A photo album as recited in claim 1, wherein said ink-receptive coating further comprises a pigment.

17. A photo album as defined in claim 16, wherein said pigment comprises nano-sized particles.

18. A photo album as recited in claim 17, wherein the pigment comprises at least one of a colloidal silica and a colloidal alumina hydrate.

19. A photo album as recited in claim 1, wherein the nonionic copolymer comprises polyvinyl alcohol, the amphoteric copolymer comprises a copolymer of trialkylammoniumalkyl (meth)acrylate monomers, acrylic acid, acrylamido-2-methylpropane sulfonic acid, and hydroxyethyl methacrylate, and the polyalkylene glycol or silicone surfactant comprises polyethylene glycol.

20. A photo album as recited in claim 1, wherein the mixture comprises about 50 to 90% by weight nonionic polymer, about 10 to 50% amphoteric copolymer, and about 1 to 5% polyalkylene glycol or silicone surfactant.

21. A photo album as defined in claim 1, wherein said ink-receptive coating is clear.

22. A photo album as defined in claim 4, wherein the coat weight of the ink-receptive coating is approximately 5-20 gram/sq. meter.

23. A photo album as defined in claim 1, wherein said ink-receptive coating is also receptive to water-based and solvent-based inks.

24. A photo album as defined in claim 1, wherein a primer is disposed on the surface of the cover.

25. A photo album as defined in claim 24, wherein said primer is one of an acrylic polymer primer or a polyurethane primer.

26. A photo album as defined in claim 25, wherein said primer is between approximately 0.5 – 2.0 microns thick.

27. A method of writing onto the cover of a photo album such as that defined in claim 1, the method comprising the steps of:

providing a photo album as defined in claim 1; and

writing an image onto the gel ink-receptive coating of the photo album cover with a gel ink pen, wherein the image comprises at least one of text and graphics and said gel ink-receptive coating protects said image from smudging.

²⁷~~28~~. A photo album comprising:

a front cover having an exterior surface formed from a water-resistant sheet material, an interior surface, and a stiffener in between said exterior surface and said interior surface;

a back cover having an exterior surface formed from a water-resistant sheet material, an interior surface, and a stiffener in between said exterior surface and said interior surface;

an ink-receptive coating disposed on at least a portion of an exterior surface of said water-resistant material, said coating comprising a mixture of a water soluble nonionic polymer, a water soluble amphoteric copolymer, and a polyalkylene glycol or silicone surfactant; and

sheets for receiving photographs, said front cover, back cover, and sheets for receiving photographs being interconnected together to form a photo album.

²⁸~~29~~. A photo album as defined in claim ²⁷~~28~~, wherein the covers have a turned-edge construction. 428/192

²⁹~~30~~. A photo album as defined in claim ²⁷~~28~~ wherein the entire exterior surface of at least one of the covers is covered with said ink-receptive coating.